



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,016	12/09/2003	Hironori Noto	10517/203	2723
23838	7590	03/30/2006	EXAMINER	
KENYON & KENYON LLP 1500 K STREET N.W. SUITE 700 WASHINGTON, DC 20005			CHU, HELEN OK	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 03/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/730,016	Applicant(s) NOTO, HIRONORI	
	Examiner Helen O. Chu	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/9/03, 12/6/03, 1/16/05, 2/1/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendments have been received on February 24, 2006. Applicant has amended claims 6 and 12.

Election/Restrictions

2. Applicant's election of claims 1-13 in the reply filed on February 24, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Therefore, Claims 14-17 has been withdrawn from consideration.

Claim Objections

3. Claim 1-13 is objected to because of the following informalities: Claim 1 recites "that is surface smoothed," revision to ""that has a smooth surface" is recommended. Appropriate correction is required.

Claims depending from claims objected are also objected for the same reason.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 4 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to the Examiner whether "the taper shape" becomes smaller in a fluid flow direction in respect to the cross sectional area of the internal manifold or in respect to the stacked cell unit side surface. Appropriate

Art Unit: 1745

correction is required. For purposes of compact prosecution, the Examiner has interpreted the recitation "the stacked cell unit side surface is taper shape such that a cross section area of the internal manifold becomes smaller in the fluid flow direction" as "the stacked cell unit side surface is taper shape which becomes smaller in the fluid flow direction in respect to the cross section area of the internal manifold."

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ballard et al. (EP 1 156 546 A1).

In respect to claims 1, 3, 5, 6 and 9 the Ruff et al reference teaches in a fuel cell stack (Figure 1, Component 10) with fuel separators (Column 4, Lines 27-29) where the fuel cell stack has a side surface that is smooth and tapered shape (Figure 1, figure on the furthest right side) compared to another surface of the stacked cell unit (Figure 1, the component at the furthest left side).

In regards to claim 2, the Ruff et al reference teaches an internal manifold (Figure 1, Component 105; Column 8, Lines 35-36) that passes through the separators (Figure 1, Component 200), wherein the stacked cell unit side surface faces the internal manifold.

In regards to claim 4 and 10, the Ruff et al reference teaches the taper shape such that it becomes smaller in a fluid flow direction in respect to the cross sectional area of the internal manifold (Figure 1). Since, the inlet and outlet flow is at Figure 1, Component 40; the right most component is tapered in respect to the direction of the fluid flow.

In regards to claims 5 and 11, the Ruff et al reference teaches a sealant (Applicant's bonding) cooperating with the separators is an elastomer (Column 4, Lines 27-30)

In regards to claims 7 and 8, the Ruff et al reference discloses the fuel cell stack with a membrane electrode assembly (MEA) that is close to the unit side surface (Figure 1, Component 100). Ruff et al also illustrates an external surface that is parallel to a cell stacked direction of the stacked cell unit.

In regards to claims 12 and 13, the Ruff et al reference discloses a sleeve (Figure 1, Component 60) inserted within the internal manifold so as to form an internal surface of the internal manifold (Column 8, Lines 35-37).

It is noted that claims 2-5 and 9-11 are product-by-process claims. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since product is

Art Unit: 1745

similar to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

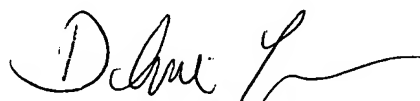
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4: 30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HOC


DAI WEI YUAN
PRIMARY EXAMINER